



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 52 and 81

[EPA-R04-OAR-2011-0084; FRL-9698-8]

Air Quality Implementation Plans; Alabama; Attainment Plan for the Alabama Portion of the Chattanooga 1997 Annual PM_{2.5} Nonattainment Area

AGENCY: Environmental Protection Agency (EPA or Agency).

ACTION: Proposed rule.

SUMMARY: EPA is proposing to approve a state implementation plan (SIP) revision submitted by the State of Alabama, through the Alabama Department of Environmental Management (ADEM) to EPA on October 7, 2009, for the purpose of providing for attainment of the 1997 fine particulate matter (PM_{2.5}) national ambient air quality standards (NAAQS) in the Alabama portion of the tri-state Chattanooga PM_{2.5} nonattainment area (hereafter referred to as the “Chattanooga Area” or “Area”). The Chattanooga Area is comprised of Catoosa and Walker Counties in Georgia; Hamilton County in Tennessee; and a portion of Jackson County in Alabama. The Alabama SIP revision (hereafter referred to as the “attainment plan”) pertains only to the Alabama portion of the Chattanooga Area (hereafter referred to as “Jackson County”). EPA is now proposing to approve Alabama’s October 7, 2009, SIP revision regarding reasonably available control technology (RACT) and reasonably available control measures (RACM); reasonable further progress (RFP); contingency measures; and, for transportation conformity purposes, an insignificance determination for PM_{2.5} and nitrogen oxides (NO_x) for the mobile source contribution to ambient PM_{2.5} levels for the Alabama portion of the Chattanooga Area. This action is being taken in accordance with the Clean Air Act (CAA or

Act) and the “Clean Air Fine Particle Implementation Rule,” hereafter referred to as the “PM_{2.5} Implementation Rule,” issued by EPA on April 25, 2007. The States of Georgia and Tennessee have provided separate SIP revisions with attainment plans for their portions for the Chattanooga Area. EPA is not addressing those SIP revisions in this proposed rulemaking.

DATES: Written comments must be received on or before [Insert date 30 days after publication in the Federal Register].

ADDRESSES: Submit your comments, identified by Docket ID Number EPA-R04-OAR-2011-0084 by one of the following methods:

1. www.regulations.gov: Follow the on-line instructions for submitting comments.
2. E-mail: R4-RDS@epa.gov.
3. Fax: (404) 562-9019.
4. Mail: EPA-R04-OAR-2011-0084 , Regulatory Development Section, Air Planning Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW, Atlanta, Georgia 30303-8960.
5. Hand Delivery or Courier: Ms. Lynorae Benjamin, Chief, Regulatory Development Section, Air Planning Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW, Atlanta, Georgia 30303-8960. Such deliveries are only accepted during the Regional Office’s normal hours of operation. The Regional Office’s official hours of business are Monday through Friday, 8:30 to 4:30, excluding federal holidays.

Instructions: Direct your comments to Docket ID No. EPA-R04-OAR-2011-0084. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit through www.regulations.gov or e-mail, information that you consider to be CBI or otherwise protected. The www.regulations.gov website is an “anonymous access” system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through www.regulations.gov, your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA’s public docket visit the EPA Docket Center homepage at <http://www.epa.gov/epahome/dockets.htm>.

Docket: All documents in the electronic docket are listed in the www.regulations.gov index. Although listed in the index, some information is not publicly available, i.e., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically in www.regulations.gov

or in hard copy at the Regulatory Development Section, Air Planning Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW, Atlanta, Georgia 30303-8960. EPA requests that if at all possible, you contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section to schedule your inspection. The Regional Office's official hours of business are Monday through Friday, 8:30 to 4:30, excluding federal holidays.

FOR FURTHER INFORMATION CONTACT: Joel Huey or Richard Wong of the Regulatory Development Section, in the Air Planning Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW, Atlanta, Georgia 30303-8960. Joel Huey may be reached by phone at (404) 562-9104, or via electronic mail at huey.joel@epa.gov. Richard Wong may be reached by phone at (404) 562-8726, or via electronic mail at wong.richard@epa.gov.

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I. What Action is EPA Proposing to Take?

EPA is proposing to approve Alabama's SIP revision for the Alabama portion of the Chattanooga Area, as submitted through the ADEM to EPA on October 7, 2009, for the purpose of demonstrating attainment of the 1997 Annual PM_{2.5} NAAQS. Alabama's PM_{2.5} attainment plan for Jackson County includes an analysis of RACM/RACT, an RFP plan, contingency measures, and an insignificance determination for mobile direct PM_{2.5} and NO_x emissions for transportation conformity purposes. EPA previously approved the base year emissions inventory for the Alabama portion of the Chattanooga Area on February 8, 2012 (77 FR 6469).

EPA has determined that Alabama's PM_{2.5} attainment plan for the 1997 Annual PM_{2.5} NAAQS for Jackson County meets the applicable requirements of the CAA and the PM_{2.5} Implementation Rule. Thus, EPA is proposing to approve Alabama's attainment plan for Jackson County, including the insignificance determination for direct PM_{2.5} and NO_x for Alabama's mobile source contribution to ambient PM_{2.5} levels in the Chattanooga Area. EPA's analysis for this proposed action is discussed in Section IV of this proposed rulemaking.

II. What is the Background for EPA's Proposed Action?

A. Designation History

On July 18, 1997 (62 FR 38652), EPA established the 1997 PM_{2.5} NAAQS as an annual standard of 15.0 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), based on a 3-year average of annual mean PM_{2.5} concentrations, and a 24-hour (or daily) standard of 65 $\mu\text{g}/\text{m}^3$, based on a 3-year average of the 98th percentile of 24-hour concentrations. EPA established the NAAQS based on significant evidence and numerous health studies demonstrating that serious health effects are associated with exposures to PM_{2.5} emissions.

Following promulgation of a new or revised NAAQS, EPA is required by the CAA to designate areas throughout the United States as attaining or not attaining the NAAQS; this designation process is described in section 107(d)(1) of the CAA. EPA and state air quality agencies initiated the monitoring process for the 1997 PM_{2.5} NAAQS in 1999 and established a complete set of air quality monitors by January 2001. On January 5, 2005, EPA promulgated initial air quality designations for the 1997 PM_{2.5} NAAQS (70 FR 944), which became effective on April 5, 2005, based on air quality monitoring data for calendar years 2001 - 2003.

On April 14, 2005, EPA promulgated a supplemental rule amending the Agency's initial designations (70 FR 19844) but retaining the original effective date of April 5, 2005. As a result of that supplemental rule, PM_{2.5} nonattainment designations were in effect for 39 areas, comprising 208 counties within 20 states (and the District of Columbia) nationwide, with a combined population of about 88 million. The Alabama portion of the tri-state (Tennessee, Georgia and Alabama) Chattanooga Area, which is the subject of this proposed rulemaking, is included in the list of areas designated nonattainment for the 1997 PM_{2.5} NAAQS. As mentioned above, the Alabama portion of the Chattanooga Area consists of a portion of Jackson County in Alabama.

On October 17, 2006, EPA strengthened the 24-hour PM_{2.5} NAAQS to 35 µg/m³ and retained the level of the Annual PM_{2.5} NAAQS at 15.0 µg/m³. *See* 71 FR 61144. On November 13, 2009, EPA designated areas as attainment/unclassifiable, unclassifiable or nonattainment with respect to the 2006 24-Hour PM_{2.5} NAAQS. *See* 74 FR 58688. Of relevance to the proposed rulemaking herein, EPA's November 2009 designation action clarified the designations for the 1997 PM_{2.5} NAAQS by relabeling the existing designation tables to specifically identify designations made for the 1997 Annual PM_{2.5} NAAQS and those made for the 1997 24-hour PM_{2.5} NAAQS (i.e., 65 µg/m³). The Alabama portion of the Chattanooga Area is only designated nonattainment for the 1997 Annual PM_{2.5} NAAQS. Accordingly, this action only pertains to that specific NAAQS.

B. Clean Air Fine Particle Implementation Rule

As noted above, on April 25, 2007, EPA issued the PM_{2.5} Implementation Rule for the 1997 PM_{2.5} NAAQS (72 FR 20586). This rule describes the CAA framework and requirements

for developing SIPs to achieve attainment in areas designated nonattainment for the 1997 PM_{2.5} NAAQS. Such attainment plans must include a demonstration that a nonattainment area will meet the applicable NAAQS within the timeframe provided in the statute. This demonstration must include modeling that is performed in accordance with 40 CFR 51.112 (Demonstration of adequacy) and Appendix W to part 51 (Guideline on Air Quality Models) and that is consistent with EPA modeling guidance. *See* 40 CFR 51.1007. The modeling demonstration should include supporting technical analyses and descriptions of all relevant adopted Federal, state, and local regulations and control measures that have been adopted in order to provide for attainment of the 1997 PM_{2.5} NAAQS by the proposed attainment date.

For the 1997 PM_{2.5} NAAQS, an attainment demonstration must show that a nonattainment area will attain the standards as expeditiously as practicable, but within 5 years of designation (i.e., by an attainment date of no later than April 5, 2010, based on air quality data for 2007 through 2009). If the area is not expected to meet the NAAQS by April 5, 2010, a state may request to extend the attainment date by 1 to 5 years based upon the severity of the nonattainment problem or the feasibility of implementing control measures in the specific area. CAA section 172(a)(2). For EPA to approve an extension of the attainment date beyond 2010, the state must provide an analysis that is consistent with the statutory criteria for an extension and that demonstrates that the attainment date is as expeditious as practicable for the area, given the existing facts and circumstances.

For each nonattainment area, the state (or each state of a multi-state area) must demonstrate that it has adopted all RACM, including all RACT, as needed to provide for attainment of the PM_{2.5} NAAQS in the area “as expeditiously as practicable.” The PM_{2.5} Implementation Rule provides guidance for making these RACM/RACT determinations. *See*

discussion in section IV.A.4. below. Any measures that are necessary to meet these requirements that are not already federally promulgated or in an EPA-approved part of the SIP must be submitted as part of a state's attainment plan. Any state measures in the control strategy must meet the applicable statutory and regulatory requirements, and, in particular, must be enforceable.

The PM_{2.5} Implementation Rule also includes guidance on precursor pollutants that states must address in their attainment plans. Section 302(g) of the CAA authorizes EPA to regulate criteria pollutants and their precursors. The main chemical precursors associated with fine particle formation are sulfur dioxide (SO₂), NO_x, volatile organic compounds (VOC), and ammonia. However, the effect of reducing emissions of precursor pollutants that contribute to PM_{2.5} concentrations varies by area depending upon local PM_{2.5} composition, emission levels, and other area-specific factors. For this reason, the PM_{2.5} Implementation Rule requires that states control the direct PM_{2.5} and SO₂ emissions and also that states control the other precursor emissions that would be most effective for attaining the NAAQS within the specific area, based upon an appropriate technical demonstration.

The PM_{2.5} Implementation Rule defines direct PM_{2.5} emissions as “solid particles emitted directly from an air emissions source or activity, or gaseous emissions or liquid droplets from an air emissions source or activity which condense to form particulate matter at ambient temperatures. Direct PM_{2.5} emissions include elemental carbon, directly emitted organic carbon, directly emitted sulfate, directly emitted nitrate, and other inorganic particles (including but not limited to crustal material, metals, and sea salt).” *See* 40 CFR 51.1000.

The PM_{2.5} Implementation Rule requires states to identify and evaluate sources of PM_{2.5} direct emissions and PM_{2.5} attainment plan precursors as appropriate. *See* 40 CFR 51.1002(c).

The rule requires states to address SO₂ as a PM_{2.5} attainment plan precursor and to evaluate SO₂ for possible control measures in all PM_{2.5} nonattainment areas. States are also required to address and evaluate reasonable controls for NO_x as a PM_{2.5} attainment plan precursor unless the state and EPA make a finding that NO_x emissions from sources in the state do not significantly contribute to PM_{2.5} concentrations in the relevant nonattainment area.

Although current scientific information shows that certain VOC emissions are precursors to the formation of secondary organic aerosol, and significant progress has been made in understanding the role of gaseous organic material in the formation of organic PM, this relationship remains complex. Further research and technical tools are needed to better characterize emissions inventories for specific VOC and to determine the extent of the contribution of specific VOC to organic PM mass. Because of these factors, the PM_{2.5} Implementation Rule does not require states to address or evaluate controls for VOC as PM_{2.5} attainment plan precursors unless the state or EPA makes a finding that VOC emissions from sources in the state significantly contribute to PM_{2.5} concentrations in the relevant nonattainment area.

The PM_{2.5} Implementation Rule describes the formation of particles related to ammonia emissions, which is a complex, nonlinear process. Though recent studies have improved our understanding of the role of ammonia in aerosol formation, further research is needed to better describe the relationship between ammonia emissions and particulate matter concentrations and the related impacts. Also, area-specific data is needed to evaluate the effectiveness of reducing ammonia emissions in reducing PM_{2.5} concentrations in different areas and to determine where ammonia decreases may increase the acidity of particles and precipitation. For these reasons, the PM_{2.5} Implementation Rule does not require states to address or evaluate controls for ammonia

as PM_{2.5} attainment plan precursors unless the state or EPA makes a finding that ammonia emissions from sources in the state significantly contribute to PM_{2.5} concentrations in the relevant nonattainment area.

The presumptive inclusion of NO_x and the presumptive exclusion of VOC and ammonia as attainment plan precursors can be reversed based on an acceptable technical demonstration for a particular nonattainment area by the state or EPA. The state must demonstrate that, based on the sum of available technical and scientific information, it would be appropriate for a nonattainment area to reverse the presumptive approach for a particular precursor. Such a demonstration should include information from multiple sources, such as results of speciation data analyses, air-quality modeling studies, chemical-tracer studies, emissions inventories, or special intensive measurement studies to evaluate specific atmospheric chemistry in an area. *See* PM_{2.5} Implementation Rule, 72 FR 20596.

The PM_{2.5} Implementation Rule also provides guidance for the other elements of a state's attainment plan, including, but not limited to, emissions inventories, contingency measures, and motor-vehicle emissions budgets used for transportation conformity purposes. There are, however, three aspects of the preamble to the PM_{2.5} Implementation Rule for which EPA received petitions requesting reconsideration. The specific guidance elements identified by petitioners pertain to the presumption that compliance with the requirements of the Clean Air Interstate Rule (CAIR) automatically satisfies the requirements for RACT or RACM for NO_x or SO₂ emissions from electric generating unit (EGU) sources participating in regional cap and trade programs (*See* PM_{2.5} Implementation Rule, section II.F.7.); the suggestion that the economic feasibility element of a RACT determination should include consideration of whether the cost of a measure is reasonable in light of the benefits (*See* PM_{2.5} Implementation Rule,

section II.F.5.); and the policy of allowing certain emission reductions from outside the nonattainment area to be credited as meeting the RFP requirement (*See* PM_{2.5} Implementation Rule, section II.G.5.). EPA has granted these petitions and intends to propose rulemaking to address these aspects of the PM_{2.5} Implementation Rule.

C. The Clean Air Interstate Rule and the Transport Rule

EPA published CAIR on May 12, 2005, to address the interstate transport requirements of the CAA. *See* 76 FR 70093. As originally promulgated, CAIR requires significant reductions in emissions of SO₂ and NO_x to limit the interstate transport of these pollutants and the ozone and fine particulate matter they form in the atmosphere. In 2008, however, the D.C. Circuit remanded CAIR back to EPA. *North Carolina v. EPA*, 550 F.3d 1176. The court found CAIR to be inconsistent with the requirements of the CAA, *North Carolina v. EPA*, 531 F.3d 896 (D.C. Cir. 2008), but ultimately remanded the rule to EPA without vacatur because it found that “allowing CAIR to remain in effect until it is replaced by a rule consistent with [the court’s] opinion would at least temporarily preserve the environmental values covered by CAIR.” *North Carolina v. EPA*, 550 F.3d at 1178. CAIR thus remained in place following the remand and was in place and enforceable through the April 5, 2010, attainment date.

In response to the court’s decision, EPA has issued a new rule to address interstate transport of NO_x and SO₂ in the eastern United States (i.e., the Transport Rule, also known as the Cross-State Air Pollution Rule). *See* 76 FR 48208, August 8, 2011. In the Transport Rule, EPA finalized regulatory changes to sunset (i.e., discontinue) CAIR and the CAIR FIPs for control periods in 2012 and beyond. *See* 76 FR 48322.

On December 30, 2012, the D.C. Circuit issued an order addressing the status of the Transport Rule and CAIR in response to motions filed by numerous parties seeking a stay of the

Transport Rule pending judicial review. In that order, the D.C. Circuit stayed the Transport Rule pending the court's resolution of the petitions for review of that rule in *EME Homer Generation, L.P. v. EPA* (No. 11-1302 and consolidated cases). The court also indicated that EPA is expected to continue to administer CAIR in the interim until the court rules on the petitions for review of the Transport Rule.

EPA does not believe that the circumstances set forth above preclude EPA from approving the attainment plan for the Alabama portion of the Chattanooga Area. While the monitoring data that shows the Area attained the 1997 Annual PM_{2.5} NAAQS by the April 2010 attainment deadline was impacted by CAIR, CAIR was in place and enforceable through the 2010 attainment date that is relevant to acting on this attainment plan. Moreover, EPA's analysis conducted for the Transport Rule demonstrates that the Chattanooga Area would be able to attain the 1997 Annual PM_{2.5} NAAQS even in the absence of either CAIR or the Transport Rule. *See* Appendix B to the Air Quality Modeling Final Rule Technical Support Document for the Cross-State Air Pollution Rule.

Most importantly, EPA notes that this action proposes approval of an attainment plan that demonstrated that the Chattanooga Area would attain the 1997 Annual PM_{2.5} NAAQS by 2010, which the Area did. As of 2010, CAIR was an enforceable control measure applicable to affected sources in the Area, as well as sources throughout the eastern U.S. As such, the fact that CAIR is now in place only temporarily as a result of the judicial remand of CAIR does not detract from our conclusion that the attainment plan should be approved. Further, the fact that the court has stayed the implementation of the Transport Rule at this time is not relevant because, as noted above, EPA's modeling for the Transport Rule demonstrates the Chattanooga Area would be able to attain the 1997 Annual PM_{2.5} even in the absence of the Transport Rule.

Finally, the Transport Rule, as promulgated, only addresses emissions in 2012 and beyond. As such, neither the Transport Rule itself, nor the judicial stay of the Transport Rule, is relevant to the question addressed in this proposal notice. The purpose of this action is to determine whether the attainment plan submitted by Alabama is sufficient for bringing the Area into attainment by the April 2010 attainment date, a date before the Transport Rule was even promulgated. For these reasons, neither the current status of CAIR nor the current status of the Transport Rule affects any of the criteria for proposed approval of this SIP revision.

D. Attaining Data Determination and Finding of Attainment

On May 31, 2011, EPA determined that the Chattanooga Area had attaining data for the 1997 Annual PM_{2.5} NAAQS. *See* 76 FR 31239. That determination was based on quality-assured, quality controlled and certified ambient air monitoring data that shows the Area met the 1997 Annual PM_{2.5} NAAQS. Furthermore, on September 8, 2011, in accordance with CAA 179(c), EPA determined that the Chattanooga Area attained the 1997 Annual PM_{2.5} NAAQS by its applicable attainment date of April 5, 2010. *See* 76 FR 55774. This information is mentioned here in support of EPA's determination that Alabama's attainment plan was sufficient for the Chattanooga Area to achieve attainment by no later than the required attainment date of April 5, 2010.

As discussed in the May 31, 2011, rulemaking, EPA's determination of attainment¹ suspended the obligation for the State to meet planning SIP requirements for the Chattanooga Area for so long as the Area continues to attain the 1997 Annual PM_{2.5} NAAQS. *See* 40 CFR 51.1004(c). The State must still submit required emissions inventories consistent with applicable

¹ The determination of attainment is not a redesignation of the Area from nonattainment to attainment and is not an indication that the Area will continue to maintain the standard for which the determination is made. It is merely a determination that the Area attained the standard for a particular three year period and also by the applicable deadline. Please see EPA's May 31, 2011, rulemaking for more detail on the effects of a determination of attainment.

timelines. The suspended SIP submission obligations include the attainment demonstration (including in this case the mobile source insignificance determination submitted to satisfy transportation conformity requirements), the RACM/RACT analysis and requirements, the RFP requirements as applicable, and contingency measures. Despite the suspension of the aforementioned attainment plan requirements for the Chattanooga Area for the 1997 Annual PM_{2.5} NAAQS, Alabama has requested that EPA take action on its planning SIP for this Area in part because the SIP submittal includes the insignificance determination for conformity purposes. Further, in September 2011, EPA agreed in a Consent Decree to take action on the State's attainment plan SIP submission, including these specific plan elements that would otherwise be suspended.

Monitoring data thus far available in the Air Quality System (AQS) database for 2011 show that this Area continues to meet the 1997 Annual PM_{2.5} NAAQS at this time. As shown in Table 4, found later in this notice, ambient PM_{2.5} levels in the Chattanooga Area have declined steadily since Alabama submitted its PM_{2.5} attainment plan in 2008.

EPA understands that the State chose not to withdraw the attainment plan SIP revision for the Alabama portion of the Chattanooga Area because it includes a mobile insignificance determination for direct PM_{2.5} and NO_x emissions from mobile sources. Therefore, as mentioned above, although the SIP planning requirements for the 1997 Annual PM_{2.5} NAAQS have been suspended for the Chattanooga Area, EPA is acting on these elements of Alabama's attainment plan for the Alabama portion of the Chattanooga Area because the State has requested it and elected not to withdraw these elements.²

² The State of Georgia withdrew its attainment plan submittal for the Georgia portion of the Chattanooga Area on June 29, 2011. The State of Tennessee has not yet withdrawn its attainment plan submittal for the Tennessee portion of the Chattanooga Area, however, EPA is not acting on that submittal at this time.

III. What is Included in Alabama's Attainment Plan Submittal for Jackson County?

Alabama's attainment plan submittal for the 1997 Annual PM_{2.5} NAAQS covers the Alabama portion of the Chattanooga Area, which is the only portion of such Area for which the State has jurisdiction. Today's action addresses only the Alabama portion of the Chattanooga Area. However, the modeling analysis provided with Alabama's attainment plan documentation includes modeling results for the entire tri-state Area that also includes the results of Georgia's and Tennessee's demonstrations for their portions of the Area, for which the conclusions of attainment are consistent with that of Alabama's. The analysis indicates that the entire Area across the three states will attain the NAAQS, and thus supports this proposed approval action.

In accordance with section 172(c) of the CAA and the PM_{2.5} Implementation Rule, the Alabama attainment plan for the Chattanooga Area includes: (1) an emissions inventory for the plan's base year (2002); (2) an attainment demonstration; and (3) an insignificance finding for the mobile source contribution of direct PM_{2.5} and NO_x. The attainment demonstration includes: technical analyses that locate, identify, and quantify sources of emissions contributing to violations of the 1997 Annual PM_{2.5} NAAQS; analyses of future-year emissions reductions and air quality improvements expected to result from national and local programs; adopted emission reduction measures with schedules for implementation; and contingency measures required under section 172(c)(9) of the CAA. *See* 72 FR 20605.

To analyze future-year emissions reductions and air quality improvements, Alabama used regional modeling analyses developed through the Association for Southeastern Integrated Planning (ASIP). The ASIP was a collaborative modeling and technical analysis effort among the States of Alabama, Kentucky, Florida, Georgia, Mississippi, North Carolina, South Carolina, Tennessee, Virginia and West Virginia to develop a regional assessment of the controls needed

to achieve attainment of the 1997 PM_{2.5} NAAQS and the 2008 8-hour ozone NAAQS. This regional modeling was performed in accordance with EPA's "Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for Ozone, PM_{2.5}, and Regional Haze" (EPA-454/B-07-002, April 2007) (hereafter referred to as "EPA's Modeling Guidance").

IV. What is EPA's Analysis of Alabama's Attainment Plan Submittal for Jackson County?

A. Attainment Demonstration

Consistent with CAA requirements (*See, e.g.*, section 172), and 40 CFR 51.1007, an attainment demonstration for a PM_{2.5} nonattainment area must include a showing that the area will attain the 1997 PM_{2.5} annual and 24-hour standards as expeditiously as practicable. The demonstration must also meet the requirements of 40 CFR 51.112 and Part 51, Appendix W, and include inventory data, modeling results, and emissions reduction analyses on which the state has based its projected attainment. In the case of the Chattanooga Area, the Area has already attained the 1997 PM_{2.5} Annual NAAQS. Thus, EPA is now proposing that the attainment plan submitted by Alabama was sufficient, and EPA is proposing to approve individual components of the plan.

1. Pollutants Addressed

As discussed in section II.B. above, the PM_{2.5} Implementation Rule requires states to identify and evaluate sources of PM_{2.5} direct emissions and appropriate PM_{2.5} attainment plan

precursors. The rule provides that SO₂ is a PM_{2.5} attainment plan precursor in all areas. The rule also sets forth the rebuttable presumptions that NO_x is a PM_{2.5} attainment plan precursor in all areas and that ammonia and VOC are not PM_{2.5} attainment plan precursors in any areas. Neither Alabama nor the EPA has found reason to reverse any of these presumptions for the Chattanooga Area. Accordingly, Alabama's PM_{2.5} attainment plan evaluates emissions of direct PM_{2.5}, SO₂, and NO_x in Jackson County.

2. Emissions Inventory Requirements

States are required under section 172(c)(3) of the CAA to develop comprehensive, accurate and current emissions inventories of all sources of the relevant pollutant or pollutants in the area. These inventories provide a detailed accounting of all emissions and emission sources by precursor or pollutant. In addition, inventories are used in air quality modeling to demonstrate that attainment of the 1997 PM_{2.5} NAAQS is as expeditious as practicable and, if an attainment date extension beyond 2010 is needed, to support the need for such an extension. Emissions inventory guidance was provided in the April 1999 document, "Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter NAAQS and Regional Haze Regulations" (EPA-454/R-99-006), which was updated in November 2005 (EPA-454/R-05-001) (hereafter referred to as "EPA's Emissions Inventory Guidance"). Emissions reporting requirements were provided in the 2002 Consolidated Emissions Reporting Rule (CERR) (67 FR 39602). On December 17, 2008 (73 FR 76539), EPA promulgated the Air Emissions Reporting Requirements (AERR) to update emissions reporting requirements in the CERR and to harmonize, consolidate and simplify data reporting by states.

In accordance with the AERR and EPA's Emissions Inventory Guidance, the PM_{2.5} Implementation Rule requires states to submit inventory information on directly emitted PM_{2.5} and the main PM_{2.5} precursors (SO₂, NO_x, VOC, and ammonia) and any additional inventory information needed to support an attainment demonstration and (where applicable) an RFP plan.

PM_{2.5} is comprised of filterable and condensable emissions. Condensable particulate matter (CPM) can comprise a significant percentage of direct PM_{2.5} emissions from certain sources and is required to be included in national emissions inventories based on emission factors. Test Methods 201A and 202 are available for source-specific measurement of condensable emissions. However, the PM_{2.5} Implementation Rule notes that there were issues raised by the Commenters related to availability and implementation of these test methods as well as uncertainties in existing data for condensable PM_{2.5}. EPA thus established a transition period during which EPA could assess possible revisions to available test methods and to allow time for states to update emissions inventories as needed to fully address direct PM_{2.5}, including condensable emissions. Because of the time required for this assessment, EPA recognized that states would be limited in how to effectively address CPM emissions and therefore established a period of transition, up to January 1, 2011, during which state submissions for PM_{2.5} were not required to address CPM emissions. Amendments to these test methods were proposed on March 25, 2009 (74 FR 12969), and finalized on December 21, 2010 (75 FR 80118). The amendments to Method 201A added a particle-sizing device for PM_{2.5} sampling, and the amendments to Method 202 revised the sample collection and recovery procedures of the method to reduce the formation of reaction artifacts that could lead to inaccurate measurements of CPM emissions.

The period of transition for establishing emission limits for condensable direct PM_{2.5} ended on January 1, 2011. Under the PM_{2.5} Implementation rule, PM_{2.5} submissions made during the transition period are not required to address CPM emissions; however, states must address the control of direct PM_{2.5} emissions, including condensable emissions, with any new action taken after January 1, 2011. Alabama submitted its Chattanooga Area attainment plan prior to January 1, 2011, and accordingly did not consider CPM in addressing the control of PM_{2.5} emissions.

In July 2008, EarthJustice filed a petition requesting reconsideration of EPA's transition period for CPM emissions provided in the PM_{2.5} Implementation Rule. In January 2009, EPA decided to allow states that have not previously addressed CPM to continue to exclude CPM for Prevention of Significant Deterioration permitting during the transition period. Today's action reflects a review of Alabama's submittal based on applicable EPA guidance as described in the PM_{2.5} Implementation Rule and at the time of Alabama's submittal.

The 172(c)(3) emissions inventory is developed by the incorporation of data from multiple sources. States were required to develop and submit to EPA a triennial emissions inventory according to the AERR for all source categories (i.e., point, area, nonroad mobile and on-road mobile). This inventory often forms the basis of data that are updated with more recent information and data that also is used in the attainment demonstration modeling inventory. Such was the case in the development of the 2002 emissions inventory that the State submitted as part of the attainment plan for this Area. The State based the 2002 emissions inventory on data developed with Visibility Improvement State and Tribal Association of the Southeast (VISTAS) contractors for the same ten states of the ASIP effort and submitted by the states to the 2002 National Emissions Inventory. Several iterations of the 2002 inventories were developed by

VISTAS for the different emission source categories resulting from revisions and updates to the data. This resulted in version G2 of the updated data, which VISTAS and states used to represent point source emissions. Data from many databases, studies and models (e.g., vehicle miles traveled, fuel programs, the NONROAD 2002 model data for commercial marine vessels, locomotives and Clean Air Market Division, etc.) resulted in the emissions inventory submitted by the State as part of this attainment plan. The data were developed by VISTAS according to EPA's Emissions Inventory Guidance and a quality assurance project plan that was developed through VISTAS and approved by EPA. EPA agrees that the process used to develop this emissions inventory was adequate to meet the requirements of the CAA, *e.g.*, CAA section 172(c)(3), and the implementing regulations.

Table 1 below shows the level of emissions, expressed in tons per year (tpy), in the Alabama portion of the Chattanooga Area for the 2002 base year by pollutant and emissions source category, as provided in the October 7, 2009, attainment plan. As stated earlier in this notice, EPA approved the base year emissions inventory for the Alabama portion of the Chattanooga Area on February 8, 2012 (77 FR 6469), as meeting the requirements of section 172(c)(3) of the CAA. The emissions inventory was approved because the State developed the emissions inventory consistent with the CAA, implementing regulations, and EPA guidance for emissions inventories.

Table 1. Base Year (2002) Actual Emissions Inventory For the Alabama Portion of the Chattanooga Area

Source Category	NO_x (tpy)	SO₂ (tpy)	PM_{2.5} (tpy)	VOC (tpy)	Ammonia (tpy)
Point	26,337	44,080	933	144	2

Area	10	17	38	98	38
Mobile	7	6	0	18	0
Nonroad	41	5	3	47	0
Total	26,395	44,108	974	307	40

Table 2 below shows the level of emissions projected by VISTAS and the State for the 2009 attainment year. While the projections for the two point sources in the Alabama portion of the Chattanooga Area indicated a slight increase in SO₂ and direct PM_{2.5} emissions, the overall 2009 statewide emission projections for Alabama, Tennessee and Georgia indicated significant decreases in SO₂ emissions. The projected 2009 emissions inventories were used by VISTAS in the modeling demonstration of attainment for the Area by that year. Although the projected 2009 emissions of SO₂ and direct PM_{2.5} from point sources in the Alabama portion of the Chattanooga Area indicated a slight increase from the 2002 actual emissions, the actual 2009 emissions that are now recorded in AQS show that significant reductions occurred in these pollutant emissions.

Table 2. Attainment Year (2009) Projected Emissions Inventory for the Alabama Portion of the Chattanooga Area

Source Category	NO_x (tpy)	SO₂ (tpy)	PM_{2.5} (tpy)	VOC (tpy)	Ammonia (tpy)
Point	5,157	45,356	1,124	177	8
Area	10	16	39	69	41
Mobile	5	1	0	11	1
Nonroad	38	2	2	37	0
Total	5,210	45,375	1,165	294	50

Additional emissions inventory information for the Alabama portion of the Chattanooga Area is included in Appendix 3 of Alabama's attainment SIP submittal. Emissions inventories for the Tennessee and Georgia portions of the Area are included in Appendices 1 and 2, respectively, of Alabama's attainment SIP submittal. This additional information is available in the docket for this final action (EPA-R04-OAR-2011-0084) on the www.regulations.gov website.

3. Modeling

The PM_{2.5} attainment demonstrations must include modeling that should be developed in accordance with EPA's Modeling Guidance. A brief description of the modeling used to support Alabama's attainment demonstration follows. More detailed information can be found in Alabama's October 7, 2009, SIP revision in the docket for this proposed action (EPA-R04-OAR-2011-0084) on the www.regulations.gov website.

Ambient PM_{2.5} typically includes both primary (directly emitted) PM_{2.5} and secondary PM_{2.5} (e.g., sulfates (SO₄) and nitrates (NO₃) formed by chemical reactions in the atmosphere). Some of the physicochemical processes leading to the formation of secondary PM_{2.5} may take hours or days, as may some of the removal processes. Thus, some sources of secondary PM_{2.5} may be sources outside of the nonattainment area. To model a sufficient geographic area to take these processes into account, Alabama's regional modeling domain covered an area slightly greater than the geographical area of the VISTAS/ASIP states in this attainment demonstration.

Alabama, through the ASIP and VISTAS, conducted an analysis of the major contributing components of PM_{2.5} in the Alabama portion of the Chattanooga Area. Specifically, organic carbon (OC) and SO₄ account for the largest contributions. The majority of OC can be

attributed to biogenic emissions and SO₄ to emissions of SO₂. SO₂ emissions are primarily associated with the point source sector. Emissions sensitivity modeling for the Chattanooga Area indicated that SO₂ emissions reductions from EGUs in Alabama, Georgia, Tennessee, and Kentucky would have the greatest benefits for the Area. The VISTAS modeling also projects limited benefits to total ambient PM_{2.5} from reductions of NO_x emissions. *See* Figure 6-1 of the SIP Narrative of Alabama's attainment SIP submittal. EPA preliminarily agrees with Alabama's assertion that controlling SO₂ from point sources is the most effective means of addressing attainment of the 1997 Annual PM_{2.5} NAAQS in the Chattanooga Area.

Model Selection and Inputs

The ASIP performed modeling for ozone and PM_{2.5} for the 10 collaborating southeastern states, including Alabama. The modeling analysis is a complex technical evaluation that began with selection of the modeling system. The ASIP and/or VISTAS used the following modeling system:

- *Meteorological Model:* The Pennsylvania State University/National Center for Atmospheric Research Mesoscale Meteorological Model is a nonhydrostatic, prognostic meteorological model routinely used for urban- and regional-scale photochemical, ozone, PM_{2.5}, and regional haze regulatory modeling studies.
- *Emissions Model:* The Sparse Matrix Operator Kernel Emissions modeling system is an emissions modeling system that generates hourly gridded speciated emission inputs of mobile, non-road mobile, area, point, fire and biogenic emission sources for photochemical grid models.

- *Air Quality Model:* The EPA's Models-3/Community Multiscale Air Quality (CMAQ) modeling system is a photochemical grid model capable of addressing ozone, particulate matter, visibility and acid deposition at a regional scale. The photochemical model selected for this study was CMAQ version 4.5. It was modified through VISTAS with a module for Secondary Organics Aerosols in an open and transparent manner that was also subjected to outside peer review.

CMAQ modeling of regional haze in the VISTAS region for 2002 and 2009 was carried out on a grid of 12x12 kilometer cells that covers the ten VISTAS states and states adjacent to them. This grid is nested within a larger national CMAQ modeling grid of 36x36 kilometer grid cells that covers the continental United States, portions of Canada and Mexico, and portions of the Atlantic and Pacific Oceans along the east and west coasts. Selection of a representative period of meteorology is crucial for evaluating baseline air quality conditions and projecting future changes in air quality due to changes in emissions of visibility-impairing pollutants. Based upon an in-depth statistical analysis tool referred to as Classification and Regression Tree (CART) analysis, VISTAS evaluated and compared the years 2000 through 2004 and selected calendar year 2002 as the most representative meteorological year available for conducting the CMAQ modeling. *See Georgia's State Implementation Plan for the Chattanooga PM_{2.5} Nonattainment Area for Catoosa and Walker Counties, Appendix D, Chapter 4, which is Appendix 2 to the Alabama attainment plan submittal.* As noted above, the VISTAS and ASIP states modeling was developed consistent with EPA's Emissions Inventory Guidance and EPA's Modeling Guidance.

VISTAS examined the model performance of the regional modeling for the areas of interest before determining whether the CMAQ model results were suitable for use in the assessment of attainment of the PM_{2.5} NAAQS and for use in the modeling assessment. The modeling assessment predicts future levels of emissions and visibility impairment used to support the 2009 PM_{2.5} control strategy. In keeping with the objective of the CMAQ modeling platform, the air quality model performance was evaluated using graphical and statistical assessments based on measured ozone, fine particles, and acid deposition from various monitoring networks and databases for the 2002 base year. A diverse set of statistical parameters from the EPA's Modeling Guidance was used to stress and examine the model and modeling inputs. Once the model performance of the 2002 base year was determined by VISTAS to be acceptable, the EPA model attainment test was used to assess whether attainment of the PM_{2.5} NAAQS would be achieved in 2009.

Alabama provided the appropriate supporting documentation for all required analyses performed by the State and also provided, in appendices to their submittal as corroborating information, the final Tennessee and Georgia attainment demonstration SIPs for the Chattanooga Area. The technical analyses and modeling used to assess attainment in 2009 for the Area is consistent with the CAA, EPA's PM_{2.5} Implementation Rule and EPA's Modeling Guidance. EPA proposes to accept the VISTAS and ASIP technical modeling to support the attainment SIP for the Area because the modeling system was chosen and simulated according to EPA's Modeling Guidance. For purposes of the Chattanooga attainment demonstration, EPA preliminarily agrees with the VISTAS model performance procedures and results, and preliminarily agrees that the CMAQ is an appropriate tool for the assessment of PM_{2.5} for the Alabama attainment demonstration for this Area. Additional details on the ASIP and VISTAS

modeling is included in Appendices 1 and 2 of the Alabama SIP, which are the final attainment demonstration SIPs for the Chattanooga Area adopted by the States of Tennessee and Georgia, respectively. Due in part to the location of the ambient PM_{2.5} monitors and the significant pollution sources in Tennessee and Georgia, these states completed their attainment demonstration SIPs before Alabama. Because all three states relied upon the same ASIP/VISTAS modeling as the basis for the attainment demonstration for this tri-state nonattainment area, Alabama included the Tennessee and Georgia submittals as appendices to their submittal.

Modeling Results

The modeling results were used in a relative sense in concert with observed ambient air quality data (i.e., taking the ratio of the modeled future PM_{2.5} concentration to the modeled present PM_{2.5} concentration and multiplying that by a PM_{2.5} “baseline design value”). EPA recommends using a baseline design value that is the average of the three design value periods that straddle the baseline inventory year (e.g., the average of the 2000-2002, 2001-2003, and 2002-2004 design value periods for a 2002 baseline inventory year). This average design value best represents the baseline concentrations while taking into account the variability of meteorology and emissions (over a five-year period). This EPA attainment test approach should reduce some of the uncertainty involved with using absolute model predictions alone. Using the model in a relative sense also reduces the effects of uneven model performance and possible major biases in predicting absolute concentrations of one or more components. The ratio of future to present model predicted air quality resulted in relative reduction factors (RRF). The multiplication of the RRF by an ambient design value from the base year (i.e., 2002) provided

estimates of future design values to determine if areas with monitors in the nonattainment area will comply with the 1997 Annual PM_{2.5} NAAQS.

EPA provided guidance to states and tribes for projecting PM_{2.5} concentrations using a “speciated modeled attainment test” (SMAT) (EPA-454/B-07-002, April 2007). Once modeling for a projection year and a base year are complete, RRFs are computed for each component of PM_{2.5} in the modeling domain. Modeling presented by Alabama, corroborated by Tennessee and Georgia as supplemental modeling (*See* Appendices 1 and 2 of the Alabama SIP in the docket), was used to assess attainment in the entire Chattanooga Area and used the following components of PM_{2.5}: SO₄, NO₃, directly emitted organic particles, and directly emitted inorganic particles. Ammonia is treated as part of SO₄ and NO₃ molecules, and water is assumed to be present at a constant mass in both the base year and projection year. For each monitoring location, the RRF for a component is computed as the ratio of the projection year divided by the base year modeled concentration for a three-cell by three-cell array of modeled grid cells centered on the monitoring location.

Projection year component concentrations are estimated by multiplying the RRFs by a monitoring based base year component concentration, determined by applying measured speciation data to the monitored total PM_{2.5} design concentration. The sum of these estimated projection year component concentrations is the estimated projection year PM_{2.5} concentration. If future estimates of PM_{2.5} concentrations are less than the 1997 PM_{2.5} NAAQS, then the modeling indicates attainment of the standard.

PM_{2.5} includes a mixture of components that can behave independently from one another (e.g., primary vs. secondary particles) or that are related to one another in a complex way (e.g., different secondary particles). Thus, it is appropriate to consider the predicted future

concentration of PM_{2.5} to be the sum of the predicted component concentrations. *See* 72 FR 20608. As recommended in EPA's Modeling Guidance, Alabama divided PM_{2.5} into its major components and noted the future effects of already implemented control strategies on each. The effect on PM_{2.5} was estimated as a sum of the effects on individual components. Future PM_{2.5} design values at specified monitoring sites were estimated by adding the future-year values of seven PM_{2.5} components (mass associated with SO₄, NO₃, ammonium (NH₄), OC, elemental carbon (EC), particle-bound water (PBW) and "other" primary inorganic particulate matter (crustal) plus passively collected mass). All future site-specific PM_{2.5} design values were below the concentration specified in the NAAQS; therefore, the Chattanooga Area passed the SMAT evaluation. Table 3 illustrates the comparison of the designation design value for 2003 with the future model-predicted 2009 annual design values for the monitors in the nonattainment area. Compliance with the PM_{2.5} annual NAAQS is predicted.

EPA has also developed a software package called Modeled Attainment Test Software (MATS) which will spatially interpolate data, adjust the spatial fields based on model output gradients and multiply the fields by model calculated RRFs. EPA recommended that the State provide MATS attainment test values for 2009, but the tool became available soon after Alabama had drafted its attainment plan. The State did not submit any MATS results in the Chattanooga SIP. However, the final report for the "Technical Support Document for the Association for Southeastern Integrated Planning (ASIP) Emissions and Air Quality Modeling to Support PM_{2.5} and 8-Hour Ozone State Implementation Plans" (ASIP Report which is included in the docket) provides 2009 MATS version 1.2.1 results for the entire Chattanooga Area and the entire ASIP/VISTAS modeling domain. As shown in Table 5-1 of this document, MATS also indicates attainment of the annual PM_{2.5} NAAQS in 2009. EPA also reviewed additional regional

modeling to support the CMAQ attainment results based on the CAMx model developed and documented in the ASIP Report. Application of the modeled attainment test with the CAMx model also produced future design values in 2009 that were below the annual PM_{2.5} NAAQS. This further supports the State's technical analysis showing that the Chattanooga Area would achieve the 1997 Annual PM_{2.5} NAAQS in 2009.

Table 3. 2003 Actual and 2009 Model-Predicted Annual PM_{2.5} Design Values (µg/m³)

Monitor ID	State	County	2003	2009
470654002	TN	Hamilton	15.2	13.6
470650031	TN	Hamilton	16.1	14.4
470651011	TN	Hamilton	14.1	12.3
132950002	GA	Walker	15.5	13.9

EPA Analysis

The modeling system was chosen and simulated by VISTAS to develop a model performance evaluation of the nonattainment area which would provide the necessary assurances that an assessment of future controls demonstrated attainment. Application of the EPA modeled attainment test and the MATS indicated future design values that are less than 15.0 µg/m³ and therefore consistent with attainment of the 1997 Annual PM_{2.5} NAAQS. Finally, the Area's monitored status as having timely attained the standard further supports the modeling results.

Current Air Quality Analysis

As noted in section II.D. above, on May 31, 2011, EPA determined that the Chattanooga Area had attaining data for the 1997 Annual PM_{2.5} NAAQS based upon data for the 3-year period 2007-2009, with a design value (i.e., the highest 3-year average of annual mean PM_{2.5} concentrations) of 12.7 µg/m³. EPA's review of more recent data shows that the Area also had

attaining data for the 3-year period 2008-2010, with a design value of 11.1 $\mu\text{g}/\text{m}^3$. These data, which have been quality-assured, certified, and recorded in EPA's AQS, are summarized in Table 4 below. In addition, monitoring data thus far available, but not yet certified, in the AQS database for 2011 show that this Area continues to meet the 1997 Annual $\text{PM}_{2.5}$ NAAQS. While the data that shows the Chattanooga Area attained the 1997 Annual $\text{PM}_{2.5}$ NAAQS by the April 2010 attainment deadline, as well as the more recent data, are impacted by CAIR, as described above in section II.C. of this notice, CAIR was enforceable though the attainment year, and EPA's modeling analysis for the Transport Rule demonstrates that the Chattanooga Area would be able to attain the 1997 Annual $\text{PM}_{2.5}$ NAAQS even in the absence of CAIR or the Transport Rule. Further, the continuing decrease in $\text{PM}_{2.5}$ concentrations in the Area also supports Alabama's determination that current emission control measures on sources were sufficient to bring the Chattanooga Area into attainment by no later than the required attainment date of April 5, 2010.

Table 4. 2007-2009 Annual Average Concentrations in the Chattanooga Area

Site Name	County	Site Number	Design Values (Average of Three Consecutive Annual Average Concentrations) ($\mu\text{g}/\text{m}^3$)			
			2008	2009	2010	2011*
Siskin Drive	Hamilton, TN	47-065-4002	14.3	12.7	11.6	11.1
Tombras Avenue	Hamilton, TN	47-065-0031	14.0	12.6	11.6	11.2
Soddy-Daisy High School	Hamilton, TN	47-065-1011	13.0	11.7	11.4	11.0
Rossville	Walker, GA	13-295-0002	13.5	12.3	10.7	10.1

* Monitoring data for 2011 are available but not yet certified in the AQS database.

4. Reasonably Available Control Measures/Reasonably Available Control Technology (RACM/RACT)

a. Requirements for RACM/RACT

CAA section 172(c)(1) requires that each attainment plan “provide for the implementation of all reasonably available control measures as expeditiously as practicable (including such reductions in emissions from the existing sources in the area as may be obtained through the adoption, at a minimum, of reasonably available control technology), and shall provide for attainment of the national primary ambient air quality standards.” EPA interprets RACM, including RACT, under section 172 as measures that a state finds are both reasonably available and contribute to attainment as expeditiously as practicable in the nonattainment area. Thus, what constitutes RACM or RACT in a specific PM_{2.5} nonattainment area is closely tied to the expeditious attainment demonstration of the plan. *See* 40 CFR 51.1010; 72 FR 20586, 20612 (April 25, 2007).

States are required to evaluate RACM/RACT for direct PM_{2.5} emissions and all of the area’s attainment plan precursors. *See* 40 CFR 51.1002(c); 72 FR 20586 20589 - 97. The state must address SO₂ as a PM_{2.5} attainment plan precursor and evaluate sources of SO₂ emissions in the state for control measures. The state must address NO_x as a PM_{2.5} attainment plan precursor and evaluate sources of NO_x emissions in the state for control measures, unless the state and EPA provide an appropriate technical demonstration for a specific area showing that NO_x emissions from sources in the state do not significantly contribute to PM_{2.5} concentrations in the nonattainment area. Also, because EPA concluded that VOC and ammonia are presumptively not regulatory precursors for PM_{2.5}, the state is not required to evaluate RACM/RACT for sources of VOC or ammonia unless there is a determination by either the state or EPA supported by an appropriate demonstration that such emissions need to be regulated for expeditious attainment of the NAAQS in the specific area.

For PM_{2.5} attainment plans, the PM_{2.5} Implementation Rule requires a combined approach to RACM and RACT under subpart 1 of Part D of the CAA (“Plan Requirements for Nonattainment Areas/Nonattainment Areas in General”). Subpart 1, unlike subparts 2 and 4, does not identify specific source categories for which EPA must issue control technique documents or guidelines and does not identify specific source categories for state and EPA evaluation during attainment plan development. *See* 72 FR 20586, 20610. Rather, under subpart 1, EPA considers RACT to be part of an area’s overall RACM obligation consistent with the section 172(c)(1) definition. Because the variable nature of the PM_{2.5} problem in different nonattainment areas may require states to develop attainment plans that address widely disparate circumstances, EPA determined not only that states should have flexibility with respect to RACM/RACT controls consistent with the statute but also that in areas needing significant emission reductions RACM/RACT controls on smaller sources may be necessary to reach attainment as expeditiously as practicable. *See* 72 FR 20586, 20612 and 20615. Thus, under the PM_{2.5} Implementation Rule, RACT and RACM are those reasonably available measures that contribute to attainment as expeditiously as practicable in the specific nonattainment area. *See* 40 CFR 51.1010; 72 FR 20586, 20612.

The PM_{2.5} Implementation Rule requires that attainment plans include the list of measures that a state considered and information sufficient to show that the state met all requirements for the determination of what constitutes RACM/RACT in a specific nonattainment area. *See* 40 CFR 51.1010(a). In addition, the rule requires that the state, in determining whether a particular emissions reduction measure or set of measures must be adopted as RACM/RACT, consider the cumulative impact of implementing the available measures and to adopt as RACM/RACT any potential measures that are reasonably available considering

technological and economic feasibility if, considered collectively, they would advance the attainment date by one year or more. If a measure or measures is not necessary for expeditious attainment of the NAAQS in the area, then by definition that measure is not RACM/RACT for purposes of the 1997 PM_{2.5} NAAQS in that area. Any measures that are necessary to meet these requirements which are not already either federally promulgated, part of the state's SIP, or otherwise creditable in SIPs must be submitted in enforceable form as part of a state's attainment plan for the area. *See* 72 FR 20586, 20614.

Guidance provided in the PM_{2.5} Implementation Rule for evaluating RACM/RACT level controls for an area also indicates that there could be flexibility with respect to those areas that were predicted to attain the 1997 PM_{2.5} NAAQS within five years of designation as a result of existing national or local measures, i.e., by April 2010 based upon monitoring data from 2007, 2008, and 2009. *See* 72 FR 20586, 20612. In such circumstances, EPA indicated that the state may conduct a more limited RACM/RACT analysis that does not involve additional air quality modeling. Moreover, the RACM/RACT analysis for such an area could focus on a review of reasonably available measures, the estimation of potential emissions reductions, and the evaluation of the time needed to implement the measures. Thus, the PM_{2.5} Implementation Rule guidance recommends that an analysis for those areas expected to attain within five years of designation as a nonattainment area for the 1997 PM_{2.5} NAAQS may be less rigorous than for areas expected to attain later.

A more comprehensive discussion of the RACM/RACT requirement for PM_{2.5} attainment plans and EPA's guidance for it can be found in the preamble to the PM_{2.5} Implementation Rule. 72 FR 20586, 20609 – 20633.

b. Alabama's Analysis of Pollutants and Sources for Jackson County

Alabama's analysis appears in chapter 6 of the October 7, 2009, attainment plan submission. The State determined that controls on sources of VOC and sources of ammonia would not be necessary for expeditious attainment of the NAAQS in this area. Thus, the State determined that control of PM_{2.5}, SO₂, and NO_x, are appropriate in the Chattanooga Area for purposes of attaining the 1997 PM_{2.5} NAAQS. EPA preliminarily agrees that Alabama's determination is supported by its analysis. The State's determination with respect to which pollutants the plan should evaluate is discussed in chapter 5 of the submittal.

The Alabama portion of the Chattanooga Area is limited to one census block in Jackson County described by U.S. Census 2000 block group identifier 01-071-9503-1. As indicated in Chapter 6 of the Technical Support Document for the air quality designations promulgated by EPA on January 5, 2005, this census block was included in the Chattanooga nonattainment area to encompass the Tennessee Valley Authority's (TVA's) Widows Creek power plant, which EPA determined to be contributing to violations of the 1997 Annual PM_{2.5} NAAQS at monitors in the nearby Tennessee and Georgia portions of the Chattanooga Area.

c. Alabama's Evaluation of RACM/RACT control measures for Jackson County

As was noted earlier, EPA included U.S. Census block 01-071-9503-1, in Jackson County, as part of the Chattanooga Area primarily because of emissions from the TVA Widows Creek power plant. For this reason, Alabama's consideration of RACM/RACT control measures for the Area focused on the Widows Creek facility. Alabama's RACM/RACT analysis is provided in Chapter 6 of the State's October 7, 2009, submittal. The Widows Creek facility has a title V permit which includes requirements to operate certain control devices, as well as key

emission limits. The facility was also included as part of the 2011 systemwide settlement with EPA which resulted in additional requirements for the facility that either will be or are already included into the title V permit to ensure they are permanent and enforceable. *See, e.g.*, <http://www.epa.gov/compliance/resources/agreements/caa/tva-ffca.pdf>.

As identified in the submittal, TVA Widows Creek has two base load units, Units 07 and 08, with rated capacities of 575 megawatts (MW) and 550 MW, respectively. The facility also has six smaller units, Units 01 through 06, which are peaking units with rated capacities of 141 MW each. The attainment year emissions for these units are shown in Table 5 below.

Table 5. Attainment Year (2009) Actual Emissions From Utility EGUs in the Alabama Portion of the Chattanooga Area³

Unit	NO _x (tpy)	SO ₂ (tpy)	PM _{2.5} * (tpy)
01	248.5	599.3	59.9
02	274.5	686.1	68.8
03	109.2	250.0	25.9
04	411.6	1022.0	102.1
05	182.0	433.6	48.9
06	893.8	2564.1	272.2
07	934.7	5368.1	266.6
08	472.1	1938.3	348.4

* The PM_{2.5} values are a total of the filterable and condensable components.

Alabama reviewed the control equipment installed on the EGUs at the TVA Widows Creek power plant and provided the following information in the summary of the State's analysis. Control of NO_x emissions is achieved by selective catalytic reduction (SCR) controls, which were installed on Units 07 and 08 in 2003 and 2004, respectively. Control of SO₂ emissions is achieved by flue gas desulfurization (FGD) controls, which were installed on Units 07 and 08 in 1984 and 1977, respectively. Control of direct PM_{2.5} emissions is achieved by

³ Table 5 shows actual emissions data obtained from EPA's National Emission Inventory, which is available at <http://www.epa.gov/ttn/chief/>.

electrostatic precipitator (ESP) controls on Units 01 through 07 and by FGD on Unit 08. The submittal states that the FGD installed on Unit 08 was upgraded in efficiency in 2004. Alabama concluded that these controls, and other associated requirements such as emission limits, were sufficient to comply with RACM/RACT requirements and that no further controls were needed at the facility to demonstrate timely attainment. EPA also evaluated the Widows Creek controls, and a summary of that evaluation follows the discussion below.

While Alabama did analyze existing controls at the TVA Widows Creek power plant for the purpose of its RACM/RACT evaluation, EPA disagrees with Alabama's conclusion that "CAIR equals RACT" for several reasons. These reasons are outlined below although it is not necessary for EPA to agree with Alabama's determination on that issue in order to approve the Jackson County attainment plan. In the preamble to the final PM_{2.5} Implementation Rule, EPA indicated that in states that fulfill their CAIR SO₂ emission reduction requirements entirely through EGU emission reductions, compliance by EGU sources with an EPA-approved CAIR SIP or a CAIR FIP could be presumed to satisfy the SO₂ RACT/RACM requirements. 72 FR 20586 at 20623. EPA also established a similar rebuttable presumption with respect to NO_x RACT/RACM for EGUs. *Id.* at 20623-24. EPA did not make any determination regarding whether RACT/RACM requirements for any particular nonattainment area were, in fact, satisfied by CAIR, but only established a presumption that could be rebutted by data demonstrating that CAIR was not sufficient to satisfy RACT/RACM with respect to a particular nonattainment area. EPA did not present technical analysis to support this presumption. Subsequent to the publication of that preamble language, the D.C. Circuit issued a decision in *NRDC v. EPA*, 571 F.3d 1245 (D.C. Cir. 2009) holding, among other things, that EPA's similar determination, in the ozone implementation rule, that compliance with the NO_x SIP Call satisfied RACT for EGUs

was unlawful because it was not supported by a technical demonstration showing that the NOx SIP Call would in fact achieve greater reductions than source-by-source RACT within the nonattainment areas. Because the presumption established by EPA in the PM_{2.5} Implementation Rule was similar, in that it was supported by reasoning but not by a technical analysis, approving a state RACT/RACM determination based on the “CAIR equals RACT” presumption would be inconsistent with the court’s ruling in *NRDC v. EPA*. In addition, EPA received a petition for reconsideration in June of 2007 that explicitly called into question the basis for the presumption on both procedural and substantive grounds. In light of the arguments raised in that petition for reconsideration, and in light of the aforementioned court decision, EPA has granted the petition for reconsideration on this issue and intends to initiate rulemaking to propose changes to this aspect of the guidance for the PM_{2.5} Implementation Rule. Third, CAIR itself was remanded to EPA by the U.S. Court of Appeals for the D.C. Circuit, *North Carolina v. EPA*, 531 F.3d 896, *as amended by* 550 F.3d 1178 (D.C. Cir. 2008). While the court found serious flaws in the rule, it decided to leave CAIR in place while EPA worked on a rule to replace it. *Id.* As mentioned above, in August 2011, EPA published in the Federal Register a rule to replace CAIR—the Transport Rule, also known as the Cross-State Air Pollution Rule. 76 FR 48208. EPA did not address whether compliance with the Transport Rule could, in any circumstances, satisfy any RACM/RACT requirements for any sources. The Transport Rule was subsequently stayed pending judicial review. In the order staying the Transport Rule, the court also instructed EPA to continue implementing CAIR while the Transport Rule is stayed. Thus, while CAIR currently remains in place, it is in place only temporarily and thus could not be said to satisfy the RACM/RACT requirement on a permanent basis.

As a result, the RACM/RACT analysis for EGUs must include an actual evaluation of the level of emission controls on any sources located within the nonattainment area to establish that, either individually or as a category, these sources are controlled to the degree necessary to meet the RACM/RACT level of control for the area. Given that the State developed and submitted the attainment plan before the legitimacy of the presumption in the guidance for the PM_{2.5} Implementation Rule was called into question, EPA is independently evaluating these sources as part of acting on the attainment plan rather than relying on the statement in the SIP submittal concerning CAIR and RACT. EPA believes that if its review of the level of SO₂ and NO_x emission controls on these sources confirms that the State's SIP already requires controls to the degree necessary to provide for expeditious attainment of the NAAQS in the area, then EPA may conclude that the sources are adequately controlled to meet the RACM/RACT requirement. In other words, so long as an actual evaluation of the EGU sources in the area demonstrates that there is a RACM/RACT level of controls, then EPA may approve the attainment plan notwithstanding the State's prior reliance on the presumption. EPA has also concluded that if the area is now attaining the 1997 PM_{2.5} NAAQS, then this is prima facie evidence that under section 172 the level of control on the EGU sources that produced the attaining level of emissions would constitute RACM/RACT for purposes of the State's attainment plan for these NAAQS. EPA notes, however, that what constitutes RACM/RACT for the 1997 PM_{2.5} NAAQS would not necessarily constitute RACM/RACT for other NAAQS because the determination of RACM/RACT under CAA section 172 is dependent on the attainment needs of the area.

Because the Alabama submittal relies in part on the rebuttable presumption articulated in the PM_{2.5} Implementation Rule that "CAIR equals RACT" for utility EGUs – a presumption that EPA cannot rely on for reasons explained above – EPA has evaluated the EGUs at TVA Widows

Creek for the purposes of RACM/RACT. EPA notes that Widows Creek facility is subject to a Federal Facilities Compliance Agreement (FFCA) between EPA and TVA (<http://www.epa.gov/compliance/resources/agreements/caa/tva-ffca.pdf>) and a Consent Decree between four states, three non-governmental organizations and TVA, entered with the United States District Court Eastern District of Tennessee at Knoxville (*Alabama et al. v. Tennessee Valley Auth.*, No. 3:11-cv-00170 and 171 (consolidated); available at <http://www.epa.gov/compliance/resources/decrees/civil/caa/tvacoal-fired-cd.pdf>). According to the FFCA and the Consent Decree, Widows Creek Units 07 and 08 must operate their SCR, FGD and ESP controls continuously while the emission units are in operation. In addition, the six peaking units are scheduled to be retired under the FFCA and the Consent Decree, two each in 2013, 2014, and 2015. This legal requirement for the current level of controls on the EGU sources ensures that the level of controls which enabled the Area to attain the standard will remain federally enforceable.

The Widows Creek facility is also subject to emission limits applicable to the facility. As described in the facility's title V operating permit,⁴ Units 01 through 08 are each subject to a particulate matter (PM) emission limit of 0.12 pounds per million British thermal units (lb/MMBtu) heat input and a NO_x averaging plan as provided in the facility's Acid Rain permit, which is included in the title V permit. Units 01 through 06 are subject to a combined SO₂ limit of 1.6 lb/MMBtu heat input and opacity limit of 20 percent, and Units 07 and 08 are each subject to an SO₂ limit of 0.9 lb/MMBtu heat input and an opacity limit of 20 percent.

One other significant source of PM, SO₂ and NO_x emissions, RockTenn CP, LLP (formerly Smurfit-Stone Container Corporation), Stevenson Mill, exists within the Alabama

⁴ Major source operating permit and Statement of Basis issued by ADEM to the TVA Widows Creek Fossil Plant, Permit No. 705-0008, December 29, 2003.

portion of the Chattanooga nonattainment area. Alabama did not evaluate this pulp and paper manufacturing facility in its RACM/RACT analysis. However, as with EPA's evaluation of RACM/RACT for EGUs, EPA has concluded that if the area is now attaining the 1997 PM_{2.5} NAAQS, then this is prima facie evidence that under section 172 the level of control on the sources that produced the attaining level of emissions would constitute RACM/RACT for purposes of the State's attainment plan for these NAAQS. As described in RockTenn CP, LLP, Stevenson Mill's title V operating permit,⁵ the following emission units and controls were in place at the facility to meet various applicable emission limits for PM, SO₂ and NO_x at the time that the Chattanooga Area achieved attainment:

- The Number 1 Power Boiler is controlled by a combination venturi-spin vane absorber and wet ESP-advance membrane up-flow system to meet SIP emission limits for PM and opacity and a Prevention of Significant Deterioration (PSD) Best Available Control Technology (BACT) emission limit for SO₂.
- The Number 2 Power Boiler is controlled by a combination venturi-spin vane absorber and wet ESP-advance membrane up-flow system to meet New Source Performance Standard (NSPS) limits and PSD/BACT limits for SO₂, PM, opacity, and NO_x.
- The Number 1 Wood Fired Boiler is controlled by mechanical dust collectors, a wet multiple-element variable throat venture scrubber, and a polishing wet ESP to meet NSPS limits and PSD/BACT limits for SO₂, PM, opacity, and NO_x.
- The Number 2 Wood Fired Boiler is controlled by a multicyclone and a dry ESP to meet NSPS limits and PSD/BACT limits for SO₂, PM, and NO_x and a state operating permit limit for opacity.

⁵ Major source operating permit and Statement of Basis issued by ADEM to Smurfit-Stone Container Corporation, Stevenson Mill, Permit No. 705-0014, October 6, 2010 (revised June 30, 2011, to change name to RockTenn CP, LLP).

- The Chemical Recovery System (CRS) is controlled by both a dry and a wet ESP to meet PSD/BACT limits for PM. SO₂ emissions from the CRS are monitored with a continuous emission monitoring system to assure compliance with NSPS limits and PSD/BACT limits. The CRS is also subject to PSD/BACT limits for NO_x and a SIP limit for opacity.

d. Proposed Action on RACM/RACT Demonstration and Control Strategy

EPA is proposing to approve Alabama's conclusion that the existing controls on emissions of PM_{2.5}, SO₂, and NO_x at the Widows Creek facility constitute RACM/RACT for that source in the Alabama portion of the Chattanooga Area based on our analysis described above. Further, as summarized above, EPA proposes that no further controls would be required at the RockTenn facility and that existing controls there are sufficient for RACM/RACT purposes for this Area, at this time. As noted above, the most current monitoring data for this Area indicates that it is attaining the 1997 Annual PM_{2.5} NAAQS. In addition, EPA has already made a clean data determination and a finding of attaining data for this Area confirming that it met the NAAQS by its attainment date. *See* 76 FR 55774, September 8, 2011. EPA's guidance for the PM_{2.5} Implementation Rule recommends that if an area is predicted through the attainment plan to attain the standards within five years after designation, then the state may submit a more limited RACM/RACT analysis and the state could elect not to do additional modeling.

In light of the fact that the Chattanooga Area attained the 1997 Annual PM_{2.5} NAAQS by the State's projected attainment date, and that at this point in time no additional measures could be adopted to attain one year sooner, EPA proposes to conclude that the attainment plan meets the RACM/RACT requirements of the PM_{2.5} Implementation Rule and that the level of control in the State's attainment plan constitutes RACM/RACT for purposes of the 1997 Annual PM_{2.5}

NAAQS. Because the PM_{2.5} Implementation Rule defines RACM/RACT as that level of control that is necessary to bring an area into timely attainment, and that no additional measures could achieve attainment one year earlier, the current level of federally enforceable controls on sources located within the Area is by definition RACM/RACT for this Area for this purpose.

Our proposed approval is based upon the determination that these emission controls are in place and are, in part, the reason for the attainment of the 1997 Annual PM_{2.5} NAAQS in the Chattanooga Area. By approving these control measures as RACM/RACT for both sources for purposes of Alabama's attainment plan, these control measures will become permanent and enforceable SIP measures to meet the requirements of the CAA and the PM_{2.5} Implementation Rule for purposes of the 1997 Annual PM_{2.5} NAAQS.

5. Reasonable Further Progress

Section 172(c)(2) of the CAA and the PM_{2.5} Implementation Rule require that attainment plans include a demonstration that reasonable further progress toward meeting air quality standards will be achieved through generally linear incremental improvement in air quality. For the 1997 PM_{2.5} NAAQS, a state is required to submit a separate RFP plan for any area for which the state seeks an extension of the attainment date beyond 2010. The PM_{2.5} Implementation Rule set forth that an area that demonstrates attainment within five years of the date of designation will be considered to have satisfied the RFP requirement and is not required to submit a separate RFP plan. *See* 40 CFR 51.1009(b). The Alabama attainment plan submittal for the Chattanooga Area by demonstrated that the Area would attain the 1997 Annual PM_{2.5} NAAQS by the April 5, 2010, attainment date. Accordingly, the State was not required under the PM_{2.5} Implementation

Rule to develop a specific RFP component of the attainment plan for this Area. We therefore propose to approve the State's attainment plan with respect to the RFP requirement.

6. Contingency Measures

In accordance with section 172(c)(9) of the CAA, the PM_{2.5} Implementation Rule requires that PM_{2.5} attainment plans include contingency measures. *See* 40 CFR 51.1012 and 72 FR at 20642- 20646, April 25, 2007. Contingency measures are additional measures to be implemented in the event that an area fails to meet RFP or fails to attain a standard by its attainment date. These measures must be fully adopted rules or control measures that can be implemented quickly and without additional EPA or state action if the area fails to meet RFP or fails to attain by its attainment date and should contain trigger mechanisms and an implementation schedule. In addition, they should be measures not already included in the SIP control strategy for attaining the standard and should provide for emission reductions equivalent to one year of RFP.

The Alabama attainment plan describes the contingency measures for the Chattanooga Area as being comprised of Georgia Rules for Air Quality Control Chapter 391-3-1 Rule (sss) "Multipollutant Control of Electric Steam Generating Units." This rule requires additional controls on power plants in Georgia after the end of 2008, resulting in SO₂ and NO_x emission reductions that were not required for demonstrating attainment of the annual PM_{2.5} NAAQS. However, as noted in section II.C. of this proposed rulemaking, EPA made a determination, based on complete, quality-assured, quality-controlled, and certified ambient air monitoring data for the 2007-2009 monitoring period, that the Chattanooga Area attained the 1997 Annual PM_{2.5}

NAAQS by the applicable attainment date of April 5, 2010. Because EPA has determined, in accordance with CAA 179(c)(1), that the Area attained by its applicable deadline, no contingency measures for failure to attain by this date need to be implemented, and EPA action with respect to contingency measures is unnecessary and would be futile and without purpose. Furthermore, as set forth in the PM_{2.5} Implementation Rule, areas that attained the NAAQS by the attainment date are considered to have satisfied the requirement to show RFP, and as such do not need to implement contingency measures to make further progress to attainment. Because EPA has determined that the Area has attained by the attainment date, the contingency measures submitted by Alabama are no longer necessary for the Chattanooga Area to meet RFP requirements or to attain the annual PM_{2.5} NAAQS by the attainment date.

7. Attainment Date

Alabama provided a demonstration of attainment of the 1997 Annual PM_{2.5} NAAQS in the Chattanooga Area by no later than five years after the Area was designated nonattainment. In accordance with the PM_{2.5} Implementation Rule, areas such as this, demonstrating that they will attain the standard by April 5, 2010, attainment deadline, are considered to have satisfied the requirement to show RFP toward attainment and need not submit a separate RFP plan. For similar reasons, such areas are also not subject under the Implementation Rule to a requirement for a mid-course review. Given that monitoring data confirm that the Chattanooga Area attained the 1997 Annual PM_{2.5} NAAQS by the date that the State anticipated in its attainment plan, that EPA has already made an attainment determination, and that the Area continues to attain those NAAQS, EPA is proposing to approve the State's attainment date.

B. Insignificance Determination for the Mobile Source Contribution to PM_{2.5} and NO_x Emissions

The CAA requires federal actions in nonattainment and maintenance areas to “conform to” the goals of SIPs. *See, e.g.*, CAA section 176. This means that such actions will not cause or contribute to violations of a NAAQS; worsen the severity of an existing violation; or delay timely attainment of any NAAQS or any interim milestone. Actions involving Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) funding or approval are subject to the transportation conformity rule (40 CFR part 93, subpart A). Under this rule, metropolitan planning organizations (MPOs) in nonattainment and maintenance areas coordinate with state air quality and transportation agencies, EPA, and the FHWA and FTA to demonstrate that their metropolitan transportation plans and transportation improvement programs (TIPs) conform to applicable SIPs. This is typically determined by showing that estimated emissions from existing and planned highway and transit systems are less than or equal to the motor vehicle emissions budgets (MVEB) contained in a SIP.

For MVEB to be approvable, they must meet, at a minimum, EPA's adequacy criteria found at 40 CFR 93.118(e)(4). In certain instances, the Transportation Conformity Rule allows areas to forgo establishment of a MVEB where it is demonstrated that the regional motor vehicle emissions for a particular pollutant or precursor are an insignificant contributor to the air quality problem in an area. The general criteria for insignificance determinations can be found in 40 CFR 93.109(f). Insignificance determinations are based on a number of factors, including the percentage of motor vehicle emissions in context of the total SIP inventory; the current state of air quality as determined by monitoring data for the relevant NAAQS; the absence of SIP motor vehicle control measures; and the historical trends and future projections of the growth of motor vehicle emissions. EPA's rationale for providing for insignificance determinations is described

in the July 1, 2004, revision to the Transportation Conformity Rule at 69 FR 40004.⁶ Specifically, the rationale is explained on page 40061 under the subsection entitled “XXIII.B. Areas with Insignificant Motor Vehicle Emissions.” Any insignificance determination under review of EPA is subject to the budget adequacy and approval process for EPA’s action on the SIP.

EPA made an insignificance finding through the transportation conformity adequacy process for NO_x and directly emitted PM_{2.5} for the Alabama portion of the Chattanooga PM_{2.5} nonattainment area on June 18, 2010 (75 FR 34734). As a result of EPA’s insignificance finding, the Alabama portion of the Chattanooga Area was no longer required to perform regional emissions analyses for either directly emitted PM_{2.5} or NO_x as part of future PM_{2.5} conformity determinations for the 1997 Annual PM_{2.5} NAAQS until such time that EPA reviewed and took action on the Chattanooga Area’s attainment plan (the subject of today’s proposed action). EPA’s June 18, 2010, insignificance finding for directly emitted PM_{2.5} and NO_x through the adequacy process (effective on July 6, 2010) only relates to the Alabama portion of the tri-state Chattanooga Area.

When EPA makes an insignificance determination through the adequacy process for transportation conformity, EPA notes that such an adequacy determination does not imply that an insignificance determination in the SIP (i.e., in this case the attainment plan) will ultimately be approved. In this case, consistent with EPA’s adequacy review of Alabama’s October 7, 2009, attainment plan and the Agency’s subsequent thorough review of the entire SIP submission, EPA is proposing to approve Alabama’s insignificance determination for the mobile source

⁶ Since the July 1, 2004, revision, 40 CFR 93.109 was revised on March 24, 2010, because of the Transportation Conformity Rule PM_{2.5} and PM₁₀ Amendments update. In the 2004 preamble and rule, the insignificance determinations were outlined in 40 CFR 93.109(k). Due to renumbering of this section in a 2012 final rulemaking, the provisions for insignificance determinations are now located at 40 CFR 93.109(f).

contribution of NO_x and PM_{2.5} emissions to the overall PM_{2.5} emissions in the Chattanooga Area. EPA preliminarily determined that Alabama's SIP submittal meets the criteria in the transportation conformity rules for an insignificance finding for both NO_x and PM_{2.5} contribution from motor vehicles in the Alabama portion of the Chattanooga Area. That is, EPA has preliminarily determined that the SIP submittal demonstrates that, for NO_x and PM_{2.5}, regional motor vehicle emissions are an insignificant contributor to the annual PM_{2.5} concentrations in the Alabama portion of the Area. This preliminary finding is based on the following factors:

- Tables 10.1.1-1 and 10.1.1-2 of Alabama's submittal demonstrate that the on-road NO_x and PM_{2.5} emissions in 2009 for the Alabama portion of the Area are less than 1 percent, each, of the total emissions for the Alabama portion of the Area.
- There have been no SIP requirements for motor vehicles control measures for the Alabama portion of the Area.
- According to the Chattanooga Area MPO's analysis, the projected mobile source emissions to 2035 indicate that there is no reason to expect highway motor vehicle growth that would cause a violation of the 1997 Annual PM_{2.5} NAAQS.
- As described above, the Area has attained the 1997 Annual PM_{2.5} standard and EPA is proposing to approve the attainment plan for the Alabama portion of the Area.

As discussed above, the Area is not currently required to perform a regional emissions analysis for the Alabama portion of the Chattanooga Area based on the adequacy determination for the finding that on-road emissions of NO_x and direct PM_{2.5} are insignificant contributors to the Area's PM_{2.5} air quality problem. Today, EPA is proposing to approve that insignificance

finding as part of the State's attainment plan for the Area. If finalized, such approval it would serve to confirm that the Alabama portion of the Area is not required to perform a regional emissions analysis for either directly emitted PM_{2.5} or NO_x as a part of future PM_{2.5} conformity determinations for the 1997 Annual PM_{2.5} standard.⁷ PM_{2.5} hot-spot analysis will continue to apply for required projects under 40 CFR 93.116 and 93.123(b) of the Transportation Conformity Rule.

Weighing all the factors for an insignificance finding, particularly the minor contribution of mobile source NO_x and PM_{2.5}, EPA has determined that the NO_x and PM_{2.5} contribution from motor vehicle emissions to the Annual PM_{2.5} pollution problem for the Alabama portion of the Area are insignificant. If finalized, EPA's insignificance finding should be considered and specifically noted in the transportation conformity documentation that is prepared for this Area.

The insignificance determination that Alabama submitted for the Chattanooga Area was developed with projected mobile source emissions derived using the MOBILE6 motor vehicle emissions model. EPA is proposing to approve the inventory and the insignificance determination because this model was the most current model available at the time Alabama was performing its analysis. However, EPA has now issued an updated motor vehicle emissions model known as Motor Vehicle Emission Simulator or MOVES. In its announcement of this model, EPA established a two-year grace period for continued use of MOBILE6 in regional emissions analyses for transportation plan and TIP conformity determinations (extending to March 2, 2012),⁸ after which states (other than California) must use MOVES in conformity

⁷ If Alabama submits a redesignation request and maintenance plan for its portion of the tri-state Chattanooga TN GA AL PM_{2.5} nonattainment area and believes that on-road emissions of NO_x and direct PM_{2.5} remain insignificant during the maintenance period, the maintenance plan will need to include information to support a finding that on-road emissions of NO_x and direct PM_{2.5} continue to be insignificant during the maintenance period. The insignificance finding for the attainment demonstration does not automatically continue to apply to the future maintenance plan.

⁸ EPA recently extended the grace period to use MOVES for regional emissions analysis in conformity

determinations for TIPs. As stated above MOBILE6.2 was the applicable mobile source emissions model that was available when this SIP was submitted. EPA's "Policy Guidance on the Use of MOVES2010 and Subsequent Minor Revisions for State Implementation Plan Development, Transportation Conformity, and Other Purposes" (<http://www.epa.gov/otaq/models/moves/documents/420b12010.pdf>) explains that the Clean Air Act does not require states that have already submitted SIPs to revise these SIPs simply because a new motor vehicle emissions model is now available. The guidance further states that the use of MOBILE6.2 in an already submitted SIP should not be an obstacle to approval of that SIP assuming that it is otherwise approvable because it would be unreasonable to require revision to a SIP which in this case was submitted prior to the release of MOVES. In this instance the on-road emissions of NO_x and PM_{2.5} represent such a small percentage of the inventory in the Alabama portion of the Area (less than 1 percent of the total inventory) that recalculating the on-road emissions with MOVES would not result in a change in the proposed conclusion that on-road emissions meet the insignificance criteria in the transportation conformity rule. 40 CFR 93.109(f).

V. Proposed Action

EPA is proposing to approve Alabama's annual PM_{2.5} attainment plan for the Alabama portion of the Chattanooga Area. EPA has preliminarily determined that the SIP meets applicable requirements of the CAA, as described in the PM_{2.5} Implementation Rule. Specifically, EPA is proposing to approve Alabama's attainment demonstration, including the RACM/RACT analysis; RFP analysis; and, for transportation conformity purposes, an

determinations to March 2, 2013 (77FR 11394).

insignificance determination for PM_{2.5} and NO_x for the mobile source contribution to ambient PM_{2.5} levels for the State's portion of the Chattanooga Area. The requirement for a RFP plan is satisfied because Alabama demonstrated attainment of the 1997 PM_{2.5} NAAQS in the Area by April 5, 2010. Also, because EPA has previously determined that the Area has attained by the attainment date, the contingency measures submitted by Alabama are no longer necessary for the Chattanooga Area to meet RFP requirements or to attain the 1997 Annual PM_{2.5} NAAQS by the attainment date.

VI. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this proposed action merely approves state law as meeting federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this proposed action:

- is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);

- does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4);
- does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, October 7, 1999);
- is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this proposed rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the state, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Intergovernmental relations, Nitrogen dioxide, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

40 CFR Part 81

Environmental protection, Air pollution control.

Authority: 42 U.S.C. 7401 *et seq.*

Dated: June 21, 2012

A. Stanley Meiburg
Acting Regional Administrator,
Region 4

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